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Effect of *Hypoxis hemerocallidea* extract and antiretroviral therapy (HAART) on testicular morphology in an experimental animal model

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**Background:** Though the successful introduction and rollout of antiretroviral therapy has impacted positively on morbidity and mortality of HIV-positive patients, its interaction with plant-based adjuvants remain sparsely investigated.

**Aims:** In this study, we reported the interaction and effects of adjuvant treatment with HAART and *Hypoxis hemerocallidea* extracts on testicular structure of rats.

**Methods:** In this study, a total of 63 pathogen-free adult male Sprague-Dawley rats were divided into nine groups and were treated according to protocols.

**Results:** HAART cocktail predisposed to significant negative testicular parameters of sperm count, motility and seminiferous tubular epithelial height (quantitatively) (p<0.03) and also altered the histomorphology of tubules with diffuse hypoplasia in seminiferous tubules. The higher dose of *Hypoxis hemerocallidea* showed a better ability to mitigate the altered parameters and compares favorably with vitamin C in this protocol. While HH did not show any deleterious impact on morphometric data, its role as adjuvant did not significantly reduce the negative impact of HAART on morphometric indices especially with the lower dosage.

**Conclusion:** While evidence continues to build on the potential long-term consequences of testicular damage following HAART, this report is the first to document the possible interactions of *Hypoxis hemerocallidea* and HAART in any scientific manner. We therefore, urge caution in the co-administration of HAART with *Hypoxis hemerocallidea* till further evidence becomes clearer on the precise pathways, mechanisms and possible dose-related issues in higher mammals.

## **Biography**

Jegede Ayoola Isaac is a PhD student at the University of KwaZulu Natal South Africa. He is a full time lecturer at the Anatomy Department of Ladoke Akintola University of Technology, Ogbomoso. Nigeria. His PhD research work focuses on the use of plant-based alternative medicinal therapy to mitigate the side effects of antiretroviral therapy on the comorbid metabolic complications in HIV management using experimental animal models.

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